

REMARKS

Status of this application

Claims 1-18 are pending. In the Office Action mailed on September 2, 2004, claims 3, 7, 9, 12, 16 and 18 were rejected under 35 U.S.C. §112, 2nd paragraph, for indefiniteness. Claims 1-18 were rejected under 35 U.S.C. §103(a) as being directed to subject matter deemed obvious in view of the combined teachings of U.S. Patent 6,292,880 issued to Mattis et al. (hereinafter "Mattis") and U.S. Patent Application Publication No. 2002/0099734 filed by Schroeder et al. (hereinafter "Schroeder").

The Indefiniteness Rejection

Claims 3, 7, 9, 12, 16 and 18 were rejected for indefiniteness because each claim recited means for, or the step of, accessing "zero or more selected ones" of the previously stored canonical messages, followed by a recitation of means for, or the step of, comparing an incoming message with said "selected ones." As the Examiner noted, a comparison cannot occur if "zero" previously stored messages were accessed. Accordingly, claims 3, 7, 9, 12, 16 and 18 have been amended to delete "zero or more" from each rejected claim. It is believed that this amendment corrects the indefiniteness objected to by the Examiner.

The Obviousness Rejection

As pointed out by the Examiner in his rejection of claim 1 in Section 7 of the Office Action, Mattis discloses a cache which compares each incoming request message (the name or URL of a requested object) with previously received and stored request messages. Mattis does this by applying a hash function to the object's name as shown in Fig. 3B to form a name key. If a match is found between the resulting name key and a given previously stored name key (that is, if the newly formed name key is found in a directory table), then a stored response (the requested object) is retrieved from the cache and returned to the sender.

As conceded by the Examiner, Mattis does not disclose converting the incoming request message into an incoming canonical request message expressed in a predetermined standard form. The Examiner states, in Section 7 on page 4 of the Action, that "Schroeder discloses converting the incoming request message 404 into an incoming canonical request message" and

that it "would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Mattis with Schroeder to easily allow disparate systems using different protocols the ability to share information easily."

Reconsideration is requested.

First, Schroeder does not teach converting a "request message" into canonical. Instead, Schroeder teaches a mechanism for transmitting the data content of documents between trading partners that use different data formats by first translating incoming data object into a standard (canonical) XML format, and then translating the data in standard format into an outgoing data object document having the format required by the system receiving the document. By translating incoming electronic business documents into an intermediate canonical format, only two translation processes are required for each participant, one for translating received documents from that participant into the canonical format, and another for translating outgoing documents from the intermediate canonical format into the format needed by that recipient. This eliminates the need for each participant to create and maintain a large number of different translation programs to exchange electronic documents with a large number of different systems.

There is nothing in Schroeder's teaching that relates to caching, and nothing that suggests that the content of requests for data objects, or the names or URL that identify data objects, should be converted to canonical form. Schroeder instead converts data objects that are being exchanged into a canonical intermediate format to reduce the number of translation programs needed to allow many different systems to exchange data.

The Examiner suggests that it "would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Mattis with Schroeder to easily allow to easily allow disparate systems using different protocols the ability to share information easily without the need for mandated data formats."

Applicants submit that there is nothing in either reference that suggests that such a combination be attempted. Schroeder does not mention caching or teach ways to improve caching, and there is nothing in either reference that suggests that Schroeder's method for facilitating the exchange of data objects between data between different systems using different protocols could or should be used to improve Mattis' caching system. And even if there were some way in which Schroeder's canonical intermediate standard data format could be combined with a cache of the type taught by Mattis, one of ordinary skill would be attempt to convert the

data objects, and not the requests for the data objects, into a standard format in order to achieve the results which are the goal of the Schroeder data exchange system.

It is accordingly requested that the rejection of claims 1-18 as being directed to subject matter deemed obvious in view of the combined teachings of Mattis and Schroeder be withdrawn.

In additions, it should be noted that applicants' claims 2, 6-9, 11, and 15-18 further specify that all or part of the request messages which are translated into canonical form are expressed in XML. As pointed out in applicants' specification, data requests expressed in XML may be logically identical but have different content; for example, logically identical XML request messages may have different line ending characters or include different whitespace characters which change the form but not the meaning of the request. Applicants' claimed technique of converting incoming XML requests into canonical form for storage and comparison allows logically identical requests to be identified, even though they don't have identical content as received.

As the Examiner concedes in Section 8, Mattis does not disclose that a portion of the incoming request message be expressed in XML language or be translated into a standard canonical XML form. In fact, the caching system described by Mattis does not mention or deal with the special problems associated with caching XML requests and responses and indeed Mattis nowhere mentions using XML for any purpose. The Examiner further states, however, that "*Schroeder discloses incoming request message is expressed in XML language and is translated into a standard canonical XML form (p. 2, IT 26-29).*" It is submitted, as pointed out above, that Schroeder (including the cited passage in Schroeder) teaches only that data objects, not requests for or names of data objects, may be converted into an intermediate XML form during transmission. Schroeder neither recognizes nor addresses the problem that differences in the form of otherwise logically identical XML request messages complicates caching, and does not describe a solution to this or any other caching problem. Thus, for the reasons noted above, there is no suggestion in either reference that would lead one of ordinary skill to combine the two teachings, and even if such a combination were made, it would not result in a system in which requests for data objects, or the names of data objects, as opposed to the data objects themselves, would be converted to canonical form.

Because the cited references, taken singly or in combination, describe neither the difficulty of efficiently caching data when different requests for that data are logically identical but have different forms, and neither reference suggests the solution to that problem as claimed by applicants, the rejection based on obviousness should be withdrawn.

Conclusion

Reconsideration of this application and allowance of claims 1-18 as now presented is requested.

Respectfully submitted,




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I hereby certify that this *Amendment* is being transmitted by facsimile to the central facsimile number of the U.S. Patent and Trademark Office, (703) 872-9306, on April 10, 2005.



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